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Rosa26^{mIre1.N906A.Cherry} - ES Cell Line RES4160**ESC Line Information**

Cell Line Name:	Rosa26 ^{mIre1.N906A.Cherry}
Parental Cell Line:	TL-1
Background Strain:	129
Culturing Protocol:	Std_mESC_Culture.doc
Description:	This ES line contains bidirectional TetO-regulated genes inserted into the Rosa26 ^{CA} allele by RMCE. In one direction the TetO/CMV promoter drives the expression of point mutant(N906A) of IRE1, an ER transmembrane kinase response to unfolded protein response (UPR). In the other direction it drives the expression of red fluorescent protein mCherry. This ES cell line can be used to simultaneously over-express Ire1(N906A) and mCherry upon administration of doxycycline when the effector protein rTA is expressed. This line can be used to study the roles of IRE1 in the response to ER stress, diet induced obesity and insulin resistance.

Genetic Alterations**1) RMCE Targeted Mutagenesis**

Type of Allele	Cassette Acceptor
Targeted Gene	gene trap ROSA 26, Philippe Soriano (Gt(ROSA)26Sor - NCBI GeneID:14910)
Targeted Allele	targeted mutation 1 (Rosa26 ^{tm1(LCA)} - MGI:104735)
Description of Targeting Vector	The Rosa 26 cassette acceptor allele was created by replacing a 5.165 kb region of this gene containing exon 1 with a floxed tk-neo cassette, a puromycin-delta-thymidine kinase fusion gene driven by the mouse phosphoglycerol kinase promoter (pU-deltaTK) and a neomycin resistant gene driven by the bacterial EM7 promoter (EM7neo) flanked by minimal (34 bp) tandemly oriented lox71 and lox2272 sites.
Targeting Vector Genbank File	pRosa26.LCA.gb

Recombinase-Mediated Cassette Exchange Stage


Type of Allele:	Gene Replacement
Exchanged Cassette Gene	mCherry and Ern2 (26918)
Exchanged Cassette Allele Name	Rosa26 ^{mIre1.N906A.Cherry}
Description of Exchange Vector	The phygro.71.2272.mIre1N906A.Cherry exchange vector was made on a backbone of a basal exchange vector wich contains Lox71/Lox2272 sites and a flrtd (flanked by FRT) P _{gk} -Hygro cassette for positive selection of ES cells after RMCE. Bidirectional Tet-O regulated genes mCherry and Ire1(N906A) were inserted between P _{gk} -Hygro and Lox2272 site.
Exchange Vector Genbank File:	phygro66.2272..mIre1N906A.cherry.gb
Citations	Not Available

Associated Images


Image 1

Description:

Access Status

 This resource is publicly viewable.

Request this Resource


 Request from a repository

Primary contributor: [Papa Lab](#)
Co-contributed by:
• [BCBC Mouse / ES Cell Core](#)

Resource Tags


embryonic, es, esc,
Rosa26^{mIre1.N906A.Cherry}, stem, TL-1

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Resource History & Actions

Approved on Sep 25, 2012
Last modified on Sep 21, 2012

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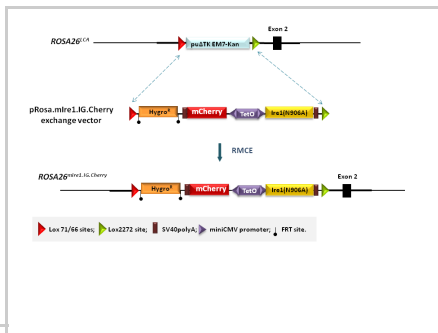
Related resources**BCBC**

No matching resources

Other Consortia

No matching resources

Data courtesy of [dkCOIN](#). Only public resources are displayed.

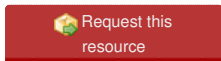


The pRosa.mIre1.IG.Cherry vector was exchanged into Rosa26^{LCA} mESCs via RMCE, thus generating the Rosa26^{mIre1.IG.Cherry} allele.

Reference:
Not provided

Repositories

Magnuson Lab



Stock #: *Not provided*
Availability Notes: *Not provided*

Contact Information

Preferred Contact

Name	Feroz Papa
Institution	University of California San Francisco
Phone	415-205-9751
Email	frpapa@medicine.ucsf.edu

Associated Publications

No publications associated

Comments

There are no comments for this entry.

